

Amendments to the Drawings:

Formal drawings are submitted herewith which incorporate the changes required by the Examiner. Approval by the Examiner is respectfully requested.

Attachment: Replacement Figures 1-11

REMARKS

Claims 1-22 are rejected. Claim 1 has been amended. Claims 1-22 are presently pending in the application. Favorable reconsideration of the application in view of the following remarks is respectfully requested.

The basis for the amendment to claim 1 can be found on page 7, line 1-8 of the specification as originally filed.

Rejection Of Claims 1-22 Under 35 U.S.C. §103(a):

The Examiner has rejected claims 1-22 under 35 U.S.C. §103(a) as being unpatentable over Brick et al. (U.S. 6,269,342 B1) in view of Kobayashi (U.S. 2002/0005827 A1). The Examiner indicates that Brick teaches a display system containing; a writable display arranged to receive data to form an image on the display, a display writer, a scanner, a processor linked to the scanner and the display writer and responsive to the identification code for programming the display writer to write an image associated with the identification code. The Examiner states that Brick fails to teach that the display is a light writable display arranged to receive an image wise pattern of light to form an image on the display, a display writer that includes a light source for producing a flash unit of light of sufficient intensity to generate sufficient heat in the light absorber to change the optical state of the cholesteric liquid crystal; an electronically programmable mask located between the light source and the display for defining the image wise pattern of light; a display drive connectable to the contacts for generating an electric field between the conductors for changing the optical state of the cholesteric liquid crystal; and a controller connected to the light source and the display drive for controlling the intensity of the electrical field and actuating the light source to create an image on the display.

The Examiner indicates that Kobayashi teaches a display system, containing a light writable display, a display writer, and a light absorber for forming an image wise thermal pattern in the cholesteric liquid crystal, wherein the display writer includes: a light source, an electronically programmable mask, a display drive, and a controller. The Examiner states that it would have been obvious to include, with the system as taught by Brick, the display being a light writable display arranged to receive an image wise pattern of light to form an image on the display, the display writer producing the image wise pattern of light.

Regarding claims 5-6, 18 and 21 the Examiner states that Brick as modified by Kobayashi fails to teach wherein the light writable display is a product label; wherein the light writable display is a shelf talker; wherein the support has an adhesive backing; and wherein the scanner is a radio frequency tag scanner. The Examiner states that the use of product labels and shelf talkers was old and well known to those of ordinary skill in the art at the time of the invention, and the use of adhesive backings on product labels and the use of radio frequency tags was also well known to those of ordinary skill in the art at the time of the invention, and therefore, it would have been obvious to include these limitations.

Regarding claims 14-17 and 19 the Examiner states that Brick et al as modified by Kobayashi fails to teach wherein the contacts are conductive ink; wherein the conductive ink is carbon in a polymer binder; wherein the display is attached to the support by the conductive ink; wherein the display is attached to the support by an anisotropic conductive adhesive providing electrical connection between the conductors of the display and the contacts on the support; wherein the polymer dispersed material is a dried emulsion of cholesteric liquid crystal in gelatin. The Examiner states that the use of conductive inks and polymer dispersed material of a dried emulsion of cholesteric liquid crystal in gelatin was well known to those of ordinary skill in the art at the time of the invention, and therefore, it would have been obvious to include these limitations. This rejection is respectfully traversed.

Brink relates to an electronic pricing and display system using programmable electronic shelf tags that are used in connection with apparatus for programming the electronic shelf tags. Pricing and product information is stored in databases of a computer system for such purposes as inventory control and updating pricing information. A portable programming device is used to transmit programming data. Methods are provided for fast and convenient modification of large numbers of electronic shelf tags located throughout a facility

Kobayashi relates to a photo-addressable type recording display apparatus realizes high sensitivity recording display and realizes recording display with short writing pulse application time. The photo-addressable type recording display apparatus is provided with a recording unit that displays an image, a light writing unit that writes an image in the recording unit by the pattern of light, and a

control unit that controls the recording unit and the light writing unit. The recording unit is provided with a spatial light modulation element and a driving unit, and the spatial light modulation element has a memory liquid crystal display element layer and organic photoconductive switching element layer. The control unit determines the magnitude and the application time of a voltage that is applied on the spatial light modulation element by the driving unit so that the threshold voltage corresponds to the voltage waveform determined correspondingly to the comparative magnitude relation between the time constant D of the liquid crystal display element layer and the time constant S of the organic photoconductive switching element layer during non-irradiation with light and irradiation with light by the light writing unit, and supplies a trigger signal for driving waveform output to the driving unit.

The present invention relates to a display system having: a light writable display associated with an identification code and arranged to receive an image wise pattern of light under a constant electric field to form an image on the display; a display writer for producing the image wise pattern of light for writing the image on the display; a scanner; and a processor.

To establish a prima facie case of obviousness, first, there must be some suggestion or motivation, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine references teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references must teach or suggest all the claim limitations.

As noted by the Examiner, Brink fails to disclose a light writable display as disclosed in the present invention. Moreover, Brink fails to disclose a light writable display arranged to receive an image wise pattern of light under a constant electric field to form an image, as claimed by the instant invention. Kobayashi also fails to disclose a light writable display that can receive an image wise pattern of light under a constant electric field to form an image. Kobayashi discloses a light switching element layer with variable impedance (paragraph 0043). Although Kobayashi mentions a light source, the reference does not disclose light writing as disclosed in the instant invention. Kobayashi utilizes light irradiation and a photoconductive layer to create heat, which varies the impedance of the display (paragraphs 0061-0062). Kobayashi utilizes a high applied voltage of light

to create a thermal pattern to form an image. Kobayashi teaches a photoconductive layer, which converts the light into heat (Paragraph 0138 and Figure 8, layer 39). Kobayashi utilizes a high voltage light source to generate heat in the photoconductive layer, this is known as a thermal pulse. In Figures 10 and 11 of the reference the operating voltage is shown to be approximately 280V. This high voltage is required to generate the necessary heat to change the impedance, so that an image can be formed. Kobayashi does not teach a light source that forms an image, but rather that the image is formed by means of the thermal pulse. The present invention does not utilize a thermal pulse to form an image. The present invention forms an image by use of light and an electric field in the absence of a thermal pulse (page 6 lines 28-30 of the specification as originally filed). The instant invention does not utilize a thermal pulse to create an image and instead utilizes the light itself to form an image. Kobayashi teaches a display that is written by means of a thermal pulse, and fails to teach a light writable display as claimed in the instant invention. Therefore, neither reference, alone or in combination, teaches or suggests a light writable display arranged to receive an image wise pattern of light under a constant electric field to form an image.

Since neither reference suggests a light writable display arranged to receive an image wise pattern of light under a constant electric field to form an image, no reasonable expectation of success is provided by the references. The flash writing of the present invention allows for much lower applied voltages. Figure 4 shows that the instant invention can operate at an applied voltage from approximately 20-60V, this utilizes less than one-fourth the power as disclosed in Kobayashi. Kobayashi would be inoperable at the voltages used by the instant invention because the lower applied voltage would not be sufficient to create a thermal pulse to form an image. Surprisingly, the instant invention forms an image by light writing, without the use of a photoconductive layer or variable impedance (Figure 2). By not needing a photoconductive layer, the present invention can be manufactured cheaper than the display as taught by Kobayashi. Furthermore, because the instant invention flash writes to the display the image can be formed quicker than if the light energy had to be converted to a thermal pulse through a photoconductive layer as taught by Kobayashi.

Finally, since neither reference discloses a light writable display arranged to receive an image wise pattern of light under a constant electric field to

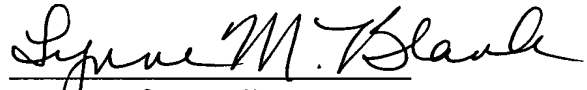
form an image, the references fail to teach or suggest all of the present claim limitations.

Since neither reference alone or in combination provides any suggestion or motivation to modify the references or to combine references teachings, provides a reasonable expectation of success or teaches or suggests all the claim limitations, the Applicants request that the Examiner reconsider and withdraw the rejection.

Claims 2-22 benefit from dependency on claim 1, which as discussed above, is believed to be non-obvious over Brink and Kobayashi, alone or in combination.

It is believed that the foregoing is a complete response to the Office Action and that the claims are in condition for allowance. Favorable reconsideration and early passage to issue is therefore earnestly solicited.

Respectfully submitted,



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Enclosures: Replacement Figures 1-11
Copies of Formal Drawings

If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.